

## CLAIMS

1. An electrical connector, comprising a housing body having a tubular plugging face for plugging in a mating connector, said tubular plugging face having a sectional shape of a substantially square with respect to a sectional plane perpendicular to a direction of plugging into said mating connector, said tubular plugging face including a square tubular portion and a cylindrical portion having sectional shapes of a square and a circle, respectively, with respect to said sectional plane, which are overlapped with each other, and at least one key or at least one key groove provided in said cylindrical portion and preventing a plugging error.
2. The electrical connector according to claim 1, wherein said tubular plugging face includes at least one additional key or at least one additional key groove provided in said square tubular portion.
3. The electrical connector according to claim 1 or 2, wherein said electrical connector is a plug connector having a plugging projection section, said tubular plugging face provided in an outer surface of said plugging projection section, and said key groove provided in an outer surface of said cylindrical portion.
4. The electrical connector according to claim 1 or 2, wherein said electrical connector is a receptacle connector having a plugging cavity section, said tubular plugging face provided on an inner surface of said plugging cavity section, said key provided in an inner surface of said cylindrical portion.
5. The electrical connector according to claim 1 or 2, wherein said cylindrical portion accommodates a coaxial terminal which is concentric with said cylindrical portion.

6. The electrical connector according to claim 5,  
wherein said coaxial terminal comprises a cylindrical outer  
conductor and a projection extending in a plugging  
direction of said outer conductor, wherein a groove for  
5 receiving said projection is provided in a coaxial terminal  
of said mating connector.

7. The electrical connector according to claim 3,  
wherein said receptacle connector comprises a flexible lock  
arm provided outside a region of said cylindrical portion  
10 but inside a region of said square tubular portion,  
extending in said plugging direction, and having a lock  
engagement claw at a top end thereof.

8. The electrical connector according to claim 7,  
wherein said cylindrical portion accommodates a coaxial  
15 terminal which is concentric with said cylindrical portion  
and said square tubular portion accommodates a signal  
terminal between cylindrical portion and said flexible lock  
arm.